

IN THE CLAIMS:

1. (Currently Amended) A data searching apparatus that searches a database of data files for a desired data file, based on a search condition set by a user, each data file including a plurality of search keys for providing clues to know data file contents, the search keys being categorized in a plurality of fields, the data searching apparatus comprising:

a receiving unit operable to receive a search ~~condition~~ query from the user;

a searching unit operable to search the database for at least one data file that satisfies the search ~~condition~~ query received by the receiving unit; and

an extracting unit operable to extract a plurality of frequently-used search keys for each of the fields, from the data file that is a search result by the searching unit,

the searching unit includes:

~~wherein the searching unit further searches the database for at least one data file that includes at least one of the search keys extracted by the extracting unit.~~

a search-key-list displaying unit operable to display a list of the frequently-used search keys extracted for each of the plurality of fields by the extracting unit;

a key-selection receiving unit operable to receive, from the user, selection of at least one search key from the list displayed by the search-key-list displaying unit; and

a selective searching unit operable to add the selected search key selected in the key-selection receiving unit to the search query so as to create a new search query, and search for a data file that satisfies the new search query.

2. (Original) The data searching apparatus of Claim 1, wherein

the extracting unit includes:

a data-file-list displaying unit operable to display a list of data files that are search results by the searching unit;

a file-selection receiving unit operable to receive, from the user, selection of a data file from the list displayed by the data-file-list displaying unit; and

a selective extracting unit operable to extract search keys, from the data file selected in the file-selection receiving unit.

3. (Original) The data searching apparatus of Claim 2, wherein

the file-selection receiving unit receives, from the user, selection of a plurality of data files one after another from the list displayed by the data-file-list displaying unit, and then receives, from the user, one of (a) a key extraction instruction to extract search keys from each of the selected data files and (b) an output instruction to output each of the selected data files,

the selective extracting unit extracts search keys from each of the selected data files when the file-selection receiving unit receives the key extraction instruction,

the searching unit, every time when the file-selection receiving unit receives selection of one or a predetermined number of data files, reads the selected data files and stores therein the read data files, and

the data searching apparatus further comprises:

a result outputting unit operable to output the data files stored in the searching unit when the file-selection receiving unit receives the output instruction.

4.-5. (Cancelled)

6. (Original) The data searching apparatus of Claim 1 that searches for a patent data file, wherein

one type of the search keys is a keyword,

the searching unit searches the database for at least one patent data file that includes a keyword,

the extracting unit extracts a plurality of frequently-used keywords, from the patent data file that is a search result by the searching unit, and

the searching unit further searches the database for at least one patent data file that includes at least one of the frequently-used keywords extracted by the extracting unit.

7. (Original) The data searching apparatus of Claim 1 that searches for a patent data file, wherein

one type of the search keys is an IPC symbol, where “IPC” represents the International Patent Classification,

the searching unit searches the database for at least one patent data file that includes an IPC symbol,

the extracting unit extracts a plurality of IPC symbols, from the patent data file that is a search result by the searching unit, and

the searching unit further searches the database for at least one patent data file that includes at least one of the IPC symbols extracted by the extracting unit.

8. (Original) The data searching apparatus of Claim 1 that searches for a patent data file, wherein

one type of the search keys is an F-term, where “F-term” represents the File Forming Term,

the searching unit searches the database for at least one patent data file that includes an F-term,

the extracting unit extracts a plurality of F-terms, from the patent data file that is a search result by the searching unit, and

the searching unit further searches the database for at least one patent data file that includes at least one of the F-terms extracted by the extracting unit.

9. (Original) The data searching apparatus of Claim 1 that searches for a patent data file, wherein

three types of the search keys are an IPC symbol, an F-term, and a keyword, where “IPC” represents the International Patent Classification, and “F-term” represents the File Forming Term,

the receiving unit receives, as search keys, at least one of IPC symbols, F-terms, and keywords,

the searching unit searches the database for at least one patent data file that includes at least one of the search keys received by the receiving unit,

the extracting unit extracts, as search keys, IPC symbols, F-terms, and frequently-used keywords, from the patent data file that is a search result by the searching unit, and

the searching unit further searches the database for at least one patent data file that includes at least one of the search keys extracted by the extracting unit.

10. (Currently Amended) A data searching method for searching a database of data files for a desired data file, based on a search condition set by a user, each data file including a plurality of search keys for providing clues to know data file contents, the search keys being categorized in a plurality of fields, the comprising:

a receiving step of receiving a search ~~condition~~ query from the user;

a searching step of searching the database for at least one data file that satisfies the search ~~condition~~ query received in the receiving step; and

an extracting step of extracting a plurality of frequently-used search keys for each of the fields, from the data file that is a search result in the searching step,

wherein the searching step includes:

displaying a list of the frequently-used search keys extracted for each of the plurality of fields by the extracting unit;

receiving, from the user, selection of at least one search key from the list displayed by the search-key-list displaying unit;

adding the selected search key selected in the key-selection receiving unit to the search query so as to create a new search query, and

searching for a data file that satisfies the new search query.

11. (Currently Amended) A computer readable storage medium having a computer program stored therein to be executed on a computer for searching a database of data files for a desired data file, based on a search condition set by a user, each data file including a plurality of search keys for providing clues to know data file contents, the program comprising:

a receiving step of receiving a search ~~condition~~ query from the user;

a searching step of searching the database for at least one data file that satisfies the search ~~condition~~ query received in the receiving step; and

an extracting step of extracting a plurality of frequently-used search keys for each of the fields, from the data file that is a search result in the searching step,

wherein the searching step includes:

displaying a list of the frequently-used search keys extracted for each of the plurality of fields by the extracting unit;

receiving, from the user, selection of at least one search key from the list displayed by the search-key-list displaying unit;

adding the selected search key selected in the key-selection receiving unit to the search query so as to create a new search query, and

searching for a data file that satisfies the new search query.

12. (New) A computer program to be executed on a computer for searching a database of data files for a desired data file, based on a search condition set by a user, the search condition being provided via a network, each data file including a plurality of search keys for providing clues to know data file contents the program comprising:

a receiving step of receiving a search query from the user;

a searching step of searching the database for at least one data file that satisfies the search query received in the receiving step; and

an extracting step of extracting a plurality of frequently-used search keys for each of the fields, from the data file that is a search result in the searching step,

wherein the searching step includes:

displaying a list of the frequently-used search keys extracted for each of the plurality of fields by the extracting unit;

receiving, from the user, selection of at least one search key from the list displayed by the search-key-list displaying unit;

adding the selected search key selected in the key-selection receiving unit to the search query so as to create a new search query, and

searching for a data file that satisfies the new search query,

wherein in the searching step, the database is further searched for at least one data file that includes at least one of the search keys extracted in the extracting step.

13. (New) The data searching apparatus of Claim 1, wherein

the search query is a logical formula including an AND search query and an OR search query; and

the selective searching unit adds, as an element of the AND search query or the OR search query, the selected search key selected in the key-selection receiving unit for each of the fields to the search query so as to create the new search query.

14. (New) A data searching apparatus that searches a database of data files for a desired data file, based on a search condition set by a user, each data file including a plurality of search keys for providing clues to know data file contents, the search keys being categorized in a plurality of fields, the data searching apparatus comprising:

a receiving unit operable to receive a search query from the user;

a searching unit operable to search the database for at least one data file that satisfies the search query received by the receiving unit;

a data-file-list displaying unit operable to display a list of data files that are search results by the searching unit;

a file-selection receiving unit operable to receive, from the user, selection of a data file from the list displayed by the data-file-list displaying unit; and

a selective extracting unit operable to extract search keys, from the data file selected in the file-selection receiving unit; wherein

the searching unit includes:

a selective searching unit operable to automatically add the search keys extracted in the selective extracting unit to the query so as to create a new search query, and search a data file that satisfies the new search query.

15. (New) The data search apparatus of Claim 14, wherein

the search query is a logical formula including an AND search query and an OR search query; and

the selective searching unit adds, as an element of the AND search query or the OR search query, the selected search key selected in the key-selection receiving unit for each of the fields to the search query so as to create the new search query.

16. (New) A database searching apparatus comprising:
 - a database having files with search keys;
 - a search condition input unit connected with the database for inputting one or more search conditions for a search;
 - a search result display unit for displaying the files found in the search;
 - a search key display unit for displaying the most frequently found search keys for the files found in the search;
 - a search key selecting unit for selecting one or more of the search keys displayed on the search key display unit; and
 - the selected one or more search keys from the search key selecting unit are fed to the search condition input unit providing refined search conditions for another search.
17. (New) The database searching apparatus of claim 16 wherein the search key display unit displays the hit ratio.
18. (New) The database searching apparatus of claim 16 wherein the files are patent files.
19. (New) The database searching apparatus of claim 18 wherein search keys include the international patent class.
20. (New) The database searching apparatus of claim 16 wherein the search key display unit displays the search keys in one or more categories.